

# MOORE BIOLOGICAL CONSULTANTS

## \*\* MEMORANDUM \*\*

Date: May 8, 2003

Subject: Testimony for Kathryn Peasha: State Energy Board Docket No.  
01-AFC-19; Biological Resources

To Whom It May Concern:

I have lived in the Herald area since 1987 and have worked as an environmental consultant since 1986. I am the Principal Biologist and owner of Moore Biological Consultants, a firm specializing in wetlands and endangered species issues. My company SOQ, which includes a summary of my qualifications is already on record.

I have grave concerns with the California Energy Commission's (CEC) potential willingness to support the applicant's (i.e., SMUD) attempt to secure woefully premature certification of this project. It is readily apparent that getting this project approved by a certain near-term date is now the focus of the application for certification process. Defensible certification of the project appears impossible at this time due to vast data gaps to be filled in by future surveys, inadequate impact analysis, lack of tangible mitigation, and the applicant's non-compliance with CEC's mandated timelines. My comments today regard several topics, each of which is addressed below.

The upcoming hearings are inappropriately scheduled due to lack of ample review time of voluminous new information. While the applicant made a weak attempt to fill five data gaps identified in staff's April 23, 2003 letter to the Commissioners and Hearing Officer, this information (i.e., Informal Data Response 16 and the Draft Biological Resources Mitigation Implementation and Monitoring Plan (BRMIMP)) were published on May

5, 2003 and provided to intervenors via mail on May 6, 2003. With hearings scheduled for May 12, 2003, this does not allow for the required 10 days of review by staff and other parties identified in the April 23, 2003 letter as "adequate". The upcoming testimonial hearing on Biological Resources must be rescheduled simply due to an inadequate review period.

The applicant has failed to respond with comprehensive and meaningful information to the five data gaps identified in staff's April 23, 2003 letter to the Commissioners and Hearing Officer. Informal Data Response 16 is a woefully inadequate response to staff's April 23, 2003 letter. The May 5, 2003 BRMIMP lacks appropriate levels of specificity, references studies not yet published, and defers to intangible potential future mitigation scenarios. A portion of at least one chapter of the copy of the BRMIMP provided to Ms. Peasha, encompassing 14 pages, is missing, precluding meaningful review.

The CEC has failed to undertake a true "CEQA-equivalent" environmental review process. The heart and soul of CEQA are comprehensive inventory and full disclosure to the public. Comprehensive inventory of biological resources is not yet complete, the impact analysis is not complete, and mitigation is not well developed or agreed upon by responsible regulatory or resource agencies (i.e., California Department of Fish and Game, U.S. Army Corps of Engineers, and U.S. Fish and Wildlife Service).

The existing inventory of wetland resources is inadequate. The wetland delineation survey boundaries do not allow for required analysis of project impacts. Further, a number of the 11"x17" wetland delineation tiles of the copy of the BRMIMP provided to Ms. Peasha, encompassing 6 pages, were missing, precluding meaningful review.

The existing surveys for burrowing owl and Swainson's hawk completed during April, 2003 are inadequate to assess project impacts and determine appropriate mitigation. First, these surveys were undertaken too early in the nesting season to confirm species presence or absence. Further, the surveys were not undertaken per published protocols, under appropriate weather conditions, or during appropriate times of day.

Project surveys for California tiger salamander completed during 2003 are questionably adequate due to highly irregular winter rain patterns. Lack of reliable baseline inventory for this species precludes assessment of project impacts and development of appropriate mitigation. It is inappropriate for the applicant and staff to assume USFWS will concur with the level of inventory for this species. Further, mitigation for impacts to California tiger salamander tiers off of yet-to-be-developed vernal pool mitigation program.

The existing inventory of occupied, potential, or suitable habitat for sensitive vernal pool species is inadequate. The wetland delineation survey boundaries do not allow for required analysis of project impacts to sensitive vernal pool species that occupy wetland habitats. It is inappropriate for the applicant and staff to assume USFWS will concur with the level of inventory for sensitive vernal pool species. Further, mitigation for impacts to sensitive vernal pool species appears to tier off of the yet-to-be-developed vernal pool mitigation program.

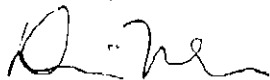
A detailed and comprehensive analysis of alternate on-site project layout pursuant to the Corps' required 404(b)(1) Alternatives Analysis has either not been prepared or not made available for review by staff and other parties. The results of this analysis could foreseeably result in significant changes in project design, including but not limited to plant layout, plant design, plant operations, pipeline alignment, and location of staging areas.

It is inappropriate to propose the possible mitigation of significant wetland impacts at existing mitigation banks. The determination of the acceptability of proposed mitigation by responsible regulatory or resource agencies has not been made as the Corps' permit process is just getting underway. However, senior Corps staff have recently stated that up and running wetland mitigation banks that have been approved by California Department of Fish and Game, U.S. Army Corps of Engineers, and U.S. Fish and Wildlife Service are intended to mitigate for projects with small impacts. In contrast, larger projects with significant wetland impacts should develop project-specific mitigation areas.

The lack of written response from U.S. Fish and Wildlife Service (USFWS) regarding acceptability or lack of acceptability of proposed conceptual mitigation is a gaping hole in the application for certification process. Almost all of the mitigation for (yet-to-be quantified) impacts to biological resources is under review by USFWS. While it has been stated that USFWS has "accepted" the April 3 Biological Assessment (BA), they have only accepted it for review related to the ongoing Section 7 consultation. It would be entirely irresponsible to interpret USFWS acceptance of the BA as any level of concurrence with proposed conceptual mitigation measures.

Once the required data is provided to staff and other parties to allow for adequate review, I look forward to the opportunity to testify again on behalf of our community. Please call me at (209) 365-6828 with any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "D. Moore", written in a cursive style.

Diane S. Moore, M.S.

Principal Biologist

Kathy Peasha  
11615 Kirkwood Street  
Herald, CA 95638  
Phone: 209-748-5277  
Fax: 209-748-5277 (Please call ahead.)

01-AFC-19

CALIF ENERGY COMMISSION

MAY 8 8 2003

RECEIVED IN DOCKETS

State of California  
State Energy Resources  
Conservation and Development Commission

In the Matter of:	)	Docket No. 01-AFC-19
Application for Certification for the	)	Addendum to Intervenor
SMUD COSUMNES POWER PLANT	)	Kathryn Peasha's
_____	)	Tentative Exhibit List

2/24/03  
PROOF OF SERVICE SERVED  
ORIGINAL MAILED FROM SACRAMENTO ON 5/8/03  
PS

While the attached article for exhibit pertains to the neighboring community.

Many residents depend on wood burning implements for their source of heat.

Some residents who attended workshops at The Rancho San Power Plant were relieved to see CEC in support of the emission reducing inserts. There

Some residents are not aware of the fact <sup>CEC no longer</sup> ~~that no longer~~ <sup>CEC</sup> ~~that is the~~ standing by the CEC supports this.

In a community where agriculture is prevalent, the paving of small roads is insignificant and the

low emission ~~inserts~~ should be implemented by SMUD and CEC to reduce the maximum amount of pollution ~~large~~ ~~energy~~ power plants are responsible for creating.

John A. Cashe

# Burning issue is being tackled

Because of dirty air, many San  
Joaquin Valley residents may  
lose warm wood fires in winter

By Brian Skoloff  
ASSOCIATED PRESS

FRESNO - San Joaquin Valley residents may face even more stringent air pollution standards if wood-burning fireplaces with newly proposed rules to be released today.

The San Joaquin Valley Air Pollution Control District's current residential wood-burning fireplace restrictions were adopted in 1993, allowing for voluntary bans on burning wood.

"The only mandatory requirement was for the district to say, 'Please don't light tonight,'" said district spokeswoman Joette Menéndez Bello. "It's good enough. The public wasn't complying voluntarily."

Last year, the Environmental Protection Agency determined the rules did not comply with federal Clean Air Act requirements, so the district proposed changes to bring the area into compliance.

Under the new rules, most wood-burning fireplaces and stoves would be banned in new homes. Non-EPA-certified fireplaces would have to be permanently disabled, converted to natural gas or goosed to soot-containing models before they could be sold.

On the approximately 25 nights each winter that air quality is determined to be bad, many in the valley would be prohibited from lighting their existing wood-burning stoves and fireplaces.

Under the proposed changes to be released today, exemptions would no longer exist for EPA-certified wood-burning devices. New rules would restrict the use of all wood-burning devices on given nights.

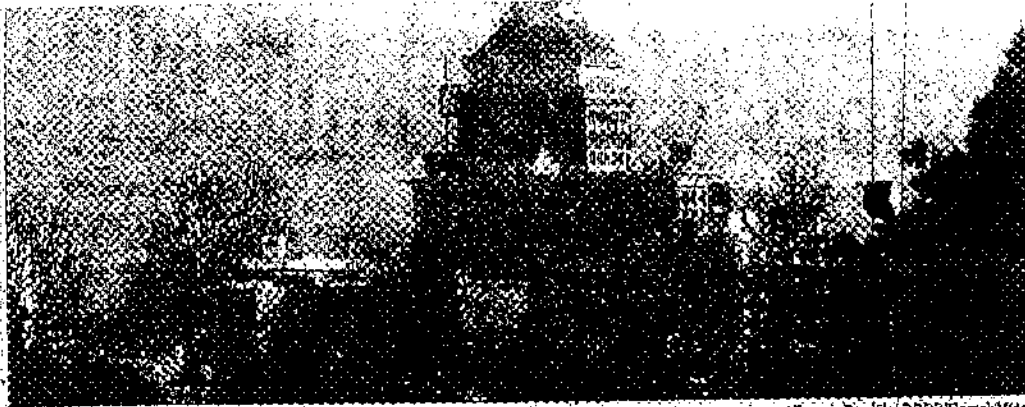
The proposed rules would still exempt homes that rely solely on wood for heat, houses above 3,000 feet and buildings where no natural gas or propane service is available. Gas-burning devices

► NURN, page A4

# Capitol & Calif







Fresno Beeble 2003/Danai Wong

Smog obscures downtown Fresno in January. Nationwide, only Los Angeles has dirtier air than the San Joaquin Valley. To fight airborne particles from burning wood, officials propose banning wood-burning fireplaces in new homes and in subdivisions with more than two houses per acre.

## Burn: Move could cost homeowners

► CONTINUED FROM A3  
also are exempt.

The changes also would not allow for wood-burning devices to be in any residential subdivisions with more than two houses per acre.

Developments with one or two buildings per acre would be allowed one wood-burning device in each home.

Homeowners would also be required to permanently disable or remove wood-burning stoves that are not federally certified or convert to gas before selling the property.

Gas stoves can cost from \$1,500 to \$3,000, not including in-

stallation, and converting traditional brick fireplaces to natural gas can cost thousands of dollars. The pollution-controlling inserts can cost between \$2,200 and \$3,400.

The valley has for years failed to meet the federal standard for small-particle pollution. Burning wood accounts for 30 percent of the problem. High concentrations of particles in the air can reduce lung function, triggering asthma and heart attacks.

Nationwide, only Los Angeles has dirtier air than the San Joaquin Valley.

Still, some members of the public are angered over the proposed

rules.

"I really think the measure is nothing more than symbolism. It's reaching into our homes and drastically changing our lifestyles on nights we may be looking forward to a nice, cozy fire," said Doug Vapin, a Fresno resident and former state Air Resources Board member who opposes the proposed ban. "And it really won't have any significant impact at all."

The air district, which covers 23,000 square miles from Lodi to Bakersfield, will present the proposed changes to the public during a series of meetings beginning May 5.

2/24/03  
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ORIGINAL MAILED FROM SACRAMENTO ON 2/18/03

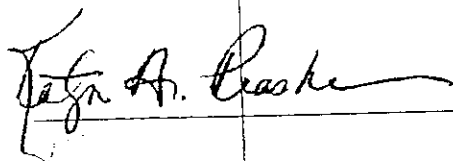
Kathryn Peasha  
11615 Kirkwood St.  
Herald, Ca. 95638

State of California  
Energy Resources Conservation  
And Development Commission

In the matter of  
Application for Certification  
SMUD Consumes Power Plant

Docket No. 01AFC-19

Evidentiary Hearing Exhibits



5-8-03

## Tentative Exhibit List Intervenor Peasha

### EXHIBIT

- 1) CARB Annual Ozone Summaries
- 2) CARB Ozone Trends Summary Sacramento Valley Air basin
- 3) CARB PM-10 Trends Summary
- 4) CARB Highest Daily PM 2.5 Measurements Sacramento T Street
- 5) CARB PM-10 Summary Sacramento T Street
- 6) Sacramento Valley Air Basin PM-10 Trends
- 7) Evidentiary Hearing Record EAEC 10-12-02 p. 198,199
- 8) CARB Power Plant Siting Manual p. 12
- 9) EPA comments Three Mountain Power Plant
- 10) EPA comments Pastoria Energy Facility
- 11) Issues Identification Report EAEC 07-19-2001
- 12) Evidentiary Hearing EAEC 10-21-02 p. 226
- 13) Tesla Power Plant Status Report 11-05-2002
- 14) CARB Memo on Road Paving ERCs
- 15) CARB 2002 Almanac Sacramento PM inventory
- 16) Tracy Peaker Plant PMPD p. 125-127
- 17) Sacramento Area Regional Ozone Attainment Plan 2002 Milestone Draft Report page 36
- 18) California Energy Commission 2002 Monthly Peak Demand Report
- 19) California Energy Commission Chart Peak Electricity Demand in the ISO Control Area with available resources and Alternative demand scenarios.
- 20) EPA comments on PDOC SMUD-Consumes Power Plant
- 21) CEC Power Plants under construction
- 22) Transport Factors ARB Almanac

## Exhibit 1



## Annual Ozone Summaries for Selected Regions

Year 2003 data are only through March 11, 2003

To see monitoring site details, click on a specific year within region of interest

Region	Year	Exceedance Days**			Maximum Concentration (ppm)	
		State 1-hr	National 1-hr	8-hr	1-hr	8-hr
Broader Sacramento Area ***	<u>2000</u>	45	7	37	0.14	0.11
	<u>2001</u>	51	3	40	0.15	0.11
	<u>2002*</u>	57	9	44	0.16	0.14
	<u>2003*</u>	0	0	0	0.06	0.05
San Diego Air Basin	<u>2000</u>	24	0	16	0.12	0.11
	<u>2001</u>	29	2	17	0.14	0.12
	<u>2002*</u>	15	0	13	0.12	0.10
	<u>2003*</u>	0	0	0	0.06	0.06
San Francisco Bay Area Air Basin	<u>2000</u>	12	3	4	0.15	0.11
	<u>2001</u>	15	1	7	0.13	0.10
	<u>2002*</u>	16	2	7	0.16	0.11
	<u>2003*</u>	0	0	0	0.05	0.04
San Joaquin Valley Air Basin	<u>2000</u>	114	30	103	0.17	0.13
	<u>2001</u>	123	32	109	0.15	0.12
	<u>2002*</u>	125	33	124	0.16	0.13
	<u>2003*</u>	0	0	0	0.07	0.07
South Coast Air Basin	<u>2000</u>	115	33	94	0.18	0.15
	<u>2001</u>	121	36	92	0.19	0.14
	<u>2002*</u>	119	47	98	0.17	0.15
	<u>2003*</u>	1	0	0	0.10	0.08
Ventura County	<u>2000</u>	38	1	30	0.13	0.11
	<u>2001</u>	34	2	24	0.13	0.11
	<u>2002*</u>	19	0	12	0.12	0.11
	<u>2003*</u>	0	0	0	0.08	0.06

N/A Data not available.

\* All 2002 and 2003 data are preliminary and subject to further review.

\*\* The number of exceedance days equals the number of distinct days on which the relevant standard was exceeded at any monitoring site in the region. If the standard was exceeded at more than one site on a given day, it only counts as one exceedance day for the broader region.

\*\*\* Broader Sacramento Area includes Sacramento Metropolitan Air Quality Management District, Yolo-Solano Air Pollution Control District, the southern third of Sutter County Air Pollution Control District, and the western portions

[http://www.arb.ca.gov/adam/cgi-bin/db2www/ozonereport\\_annual.d2w/start](http://www.arb.ca.gov/adam/cgi-bin/db2www/ozonereport_annual.d2w/start)

3/11/2003

## Exhibit 2

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## Ozone Trends Summary: Sacramento Valley Air Basin

Year	Days > Standard		1-Hour Observations		8-Hour Averages		EPDC	Year Coverage
	1-Hour	8-Hour	Maximum	3-Year 4th High	Maximum	3-Year Average 4th High		
2002	4	5	33	0.139	0.132	0.120	0.135	100
2001	1	2	37	0.142	0.133	0.108	0.138	100
2000	0	5	35	0.138	0.148	0.108	0.153	100
1999	0	7	43	0.160	0.148	0.129	0.155	100
1998	0	14	60	0.160	0.148	0.137	0.161	100
1997	0	3	15	0.143	0.133	0.107	0.141	100
1996	0	3	44	0.157	0.145	0.126	0.154	99
1995	0	11	40	0.156	0.145	0.128	0.149	100
1994	0	9	43	0.145	0.143	0.121	0.148	100
1993	0	7	22	0.150	0.150	0.120	0.159	100

Years: Ozone data are available for this basin from 1973 through 2002.

Notes: All concentrations expressed as parts per million.

State exceedances shown in yellow. National exceedances shown in orange.

An exceedance is not necessarily a violation.

Go to:	<a href="#">Data Statistics Home Page</a>	<a href="#">Trends Summaries Start Page</a>	<a href="#">PM10 Trends for this Basin</a>
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## PM10 Trends Summary: Sacramento Valley Air Basin

Est. Days > Std.			Annual Averages		3-Year	Maximum	Year	
Year	State	Nat'l	Geometric	Arithmetic	Average	Observation	EPDC	Coverage
2002	0	0	27.3	30.9	30	111.6	0	
2001	0	0	26.1	30.2	32	140.7	100	
2000	0	0	24.7	27.9	30	163.2	100	
1999	6	6	30.2	38.4	30	206.4	100	
1998	0	0	22.8	29.0	28	116.0	100	
1997	0	0	25.3	28.6	30	136.6	100	
1996	0	0	25.5	29.8	32	128.7	100	
1995	0	0	26.3	33.4	32	134.9	100	
1994	0	0	30.0	34.5	35	121.7	100	
1993	0	0	28.8	36.9	37	130.0	100	

Years: PM10 data are available for this basin from 1983 through 2002.

Notes: All concentrations expressed as micrograms per cubic meter.

State exceedances shown in orange, National exceedances shown in orange.

An exceedance is not necessarily a violation.

Go to: [Data Statistics Home Page](#) [Trends Summaries Start Page](#) [Ozone Trends for this Basin](#)



# California Air Resources Board

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[8-Hour O<sub>3</sub>](#)
[PM 10](#)
[PM 2.5](#)
[CO](#)
[NO<sub>2</sub>](#)

## Highest 4 Daily PM2.5 Measurements **12/01** and Annual PM2.5 Statistics at Sacramento-T Street micrograms per cubic meter

	2000		2001		2002	
High	Jan 09	67.0	Jan 20	72.0	Nov 28	73.0
2nd High	Dec 28	64.0	Jan 02	63.0	Nov 27	69.0
3rd High	Jan 08	63.0	Dec 13	58.0	Nov 20	68.0
4th High	Dec 29	56.0	Jan 04	55.0	Nov 29	66.0
*Days > Nat'l Standard		1		1		4
98th Percentile		49.0		53.0		63.0
**3-Year Average 98th		72				
Nat'l Annual Average		12.3		11.6		14.3
**3-Year Nat'l Average		28.4		13.6		12.7
***Year Coverage						

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- \* The number of days a measurement was greater than the level of the national daily standard (65 micrograms per cubic meter). Measurements are collected everyday, every three days, or every six days, depending on the time of year and the site's monitor schedule. The number of days above the standard is not directly related to the number of violations of the standard for the year.
- \*\* The 3-year statistics include data from the listed year and the two years before the listed year.
- \*\*\* Year Coverage indicates how extensive monitoring was during the time of year when high pollutant concentrations are expected. Year coverage ranges from 0 to 100. For example, a Year Coverage of 75 indicates that monitoring occurred 75% of the time when high pollutant concentrations are expected. For the current year, Year Coverage will be 0 at the beginning of the year and will increase as the data for the year become available. Year Coverage is blank when the data history at the site is insufficient to determine when high concentrations are expected.

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## PM10 Trends Summary: Sacramento-T Street

10/20/01

Year	Est. Days > Std.		Annual Averages		3-Year Average	Maximum Observation	EPDC	Year Coverage
	State	Nat'l	Geometric	Arithmetic				
2002	0	0	23.6	26.7	25	107	94.1	
2001	0	0	22.4	25.0	26	98	111.8	95
2000	0	0	22.9	24.6	25	99	102.5	100
1999	0	0	23.7	28.7	25	90	115.6	100
1998	0	0	19.9	22.6	24	78	86.2	100
1997	0	0	20.9	23.2	26	100	105.4	100
1996	0	0	22.2	24.9	28	78	111.8	100
1995	0	0	26.3	28.8	29	85	109.5	100
1994	0	0	26.1	30.2	30	90	103.5	100
1993	0	0	25.3	28.5	34	77	130.0	100

Area: Sacramento County; Sacramento Valley Air Basin

District: Sacramento County APCD

Years: PM10 data are available for this site from 1990 through 2002.

Notes: All concentrations expressed as micrograms per cubic meter.

State exceedances shown in yellow, National exceedances shown in orange.

An exceedance is not necessarily a violation.

Go to: [Data Statistics Home Page](#) [Trends Summaries Start Page](#) [Ozone Trends for this Site](#)



## Sacramento Valley Air Basin PM<sub>10</sub> Emission Trends and Forecasts

Direct emissions of PM<sub>10</sub> are increasing in the Sacramento Valley Air Basin between 1995 and 2010. This increase is due to growth in emissions from area-wide sources, primarily fugitive dust from paved and unpaved roads, fugitive dust from construction and demolition, and particulates from residential fuel combustion. As also observed in other areas of the State, these area-wide PM<sub>10</sub> emissions have gone up as a result of population growth and increased vehicle travel. Emissions of directly emitted PM<sub>10</sub> from mobile sources and stationary sources in the Sacramento Valley Air Basin have remained relatively steady.

PM <sub>10</sub> Emission Trends (tons/day, annual average)											
Emission Source	1975	1980	1985	1990	1995	2000	2005	2010			
All Sources	218	236	215	246	240	253	275	297			
Stationary Sources	22	16	14	16	15	15	16	17			
Area-wide Sources	186	209	191	217	216	229	249	270			
On-Road Mobile	3	3	4	3	4	4	4	4			
Gasoline Vehicles	1	1	2	2	2	2	3	3			
Diesel Vehicles	1	2	3	4	4	2	1	1			
Other Mobile	7	8	7	7	6	6	6	5			

Table 4-36

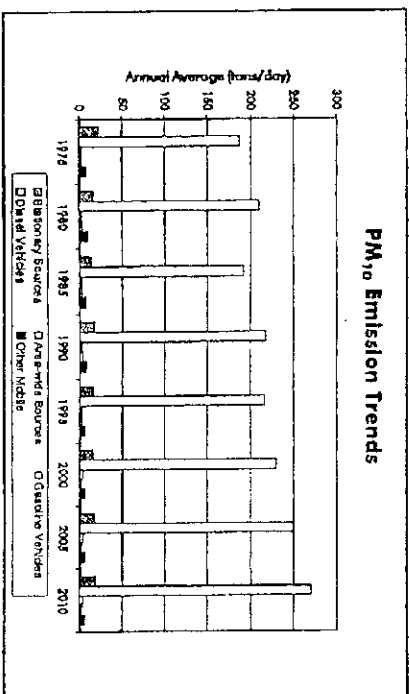


Figure 4-45

Exhibit 7A  
EVIDENTIARY HEARING  
BEFORE THE  
CALIFORNIA ENERGY RESOURCES CONSERVATION  
AND DEVELOPMENT COMMISSION

In the Matter of:	)	
	)	
Application for Certification	)	Docket No.
for the East Altamont Energy	)	01-AFC-4
Center	)	
<hr/>		

TRACY ELKS LODGE # 2031  
6400 11TH STREET  
TRACY, CALIFORNIA

MONDAY, OCTOBER 21, 2002  
10:21 a.m.

Reported by:  
Valorie Phillips  
Contract No. 170-01-001

PETERS SHORTHAND REPORTING CORPORATION (916) 362-2345

1 ammonia levels when I prepared that discussion on  
2 page 2.1-17 in my testimony, but I did not include  
3 the numbers in there.

4 Q Okay. So, assuming there is no -- well,  
5 let's assume that there is, since we can't verify  
6 there isn't any local impact from ammonia  
7 emissions, how about regional level, what do we  
8 expect to see from what will impact the region  
9 from these ammonia emissions and formation of  
10 secondary PM2.5?

11 A Okay, first I need to correct my  
12 previous answer. I just saw in my testimony I  
13 said quite clearly that there are no data on  
14 ambient ammonia levels. What we do, because of  
15 that lack of data, is to infer, based on the  
16 relative sulfate and nitrate concentrations,  
17 whether a region is ammonia rich or not.

18 And you can tell by the ratio of those  
19 two whether there's sufficient ammonia for further  
20 reactions to occur. So, I did, by inference, not  
21 by actual ammonia data.

22 In terms of regional formation of  
23 particulates, the longer the period of time you  
24 have for the reactions to occur the greater the  
25 possibility that you may have some particulate

PETERS SHORTHAND REPORTING CORPORATION (916) 362-2345

1 formation because the ammonia may be transported  
2 into a region that is, in fact, not ammonia rich.  
3 But I did not do any calculations or assessment of  
4 that, either.

5 Q So, we could reasonably say that we  
6 don't have any estimates of ammonia nitrate PM2.5  
7 formations locally or regionally, is that correct?

8 A You don't have any quantitative  
9 estimates; what you have are the qualitative  
10 judgments by me, by the Bay Area District and by  
11 the San Joaquin District.

12 Q So in the absence of any say  
13 quantitative formation --

14 A Right.

15 Q How many pounds of ammonia is this  
16 facility going to emit per year?

17 A You can find that information in the AFC  
18 at table 8.1-22; it's about 274 tons per year of  
19 ammonia.

20 Q So in the absence of any quantitative  
21 information or any formula for deriving PM2.5  
22 formation from ammonia, and we have 274 tons of  
23 ammonia being emitted from this facility, so we  
24 have a degree of uncertainty as to whether this  
25 ammonia impact is going to be significant or not,

PETERS SHORTHAND REPORTING CORPORATION (916) 362-2345



## **Guidance for Power Plant Siting and Best Available Control Technology**

**As Approved by the Air Resources Board on July 22, 1999**

**Stationary Source Division  
Issued September 1999**

Permit conditions specifying the emission limits should be expressed in the same form as the underlying regulatory requirement. For example, if a BACT requirement is expressed as an emission concentration measured at a given averaging time and exhaust gas oxygen content, the permit condition implementing the requirement should utilize the same parameters.

2. Equipment Startup and Shutdown

A district should address all phases of plant operations in BACT decisions and assure that controls are required and used where feasible to minimize power plant emissions; permit emission limits should be written to apply to turbine emissions for all potential loads. Emissions generated during equipment startup and shutdown should be regulated by a separate set of limitations to optimize emission control; to regulate these emissions, permit conditions should limit and require record keeping of the number of daily and annual startups and shutdowns. The power plant operator should be required to have a district-approved plan to minimize emissions from equipment startup and shutdown.

3. Source Testing and Monitoring

ARB's goal is to assure initial and ongoing compliance of each power plant with BACT and other emission limits specified in permit conditions. Compliance with BACT and other emission limits is most easily verified through continuous emission monitors (CEMs) and annual source testing, using certified methods that meet district, State, and federal protocols.

4. Fuel Sulfur Content

The permit should include conditions to address SO<sub>x</sub> emission levels and to require that the levels be determined using the upper limit of the sulfur content specified in the natural gas supplier's contract.

5. Ammonia Slip

The permit should include conditions to minimize the amount of ammonia slip to a health protective level when selective catalytic reduction is used as a control method; districts should consider establishing ammonia slip levels at or below 5 ppmvd at 15 percent oxygen.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX  
75 Hawthorne Street  
San Francisco, CA 94105

Exhibit 9 A

February 4, 2000

DOCKET

99-AFC-2

DATE FEB 04 2000

RECD. FEB 07 2000

Mr. Michael Kussow, P.E.  
Air Pollution Control Officer  
Shasta County Air Quality Management District  
1855 Placer Street, Suite 101  
Redding, CA 96001

Re: **Comments on Three Mountain Power Project Preliminary Determination of Compliance**

Dear Mr. Kussow:

Thank you for the opportunity to comment on the Preliminary Determination of Compliance (PDOC) for the Three Mountain Power Project located near Burney, Shasta County. Consistent with District Rule 2:1 (New Source Review) and the 1985 PSD Delegation Agreement between EPA and Shasta County AQMD, we have performed a review of the PDOC. The purpose of the review is to ensure that the PDOC complies with 40 CFR 52.1 and Rule 2:1, as well as applicable NSPS and MACT requirements.

The portion of this PDOC containing the NOx and CO BACT analysis does not comply with 40 CFR 52.21, because it did not consider all available control technologies required in the "top-down" approach. Specifically, the analysis improperly rejected SCONox as an available control technology. We believe that the SCONox technology has been available and feasible for this project since at least December 1999. Therefore, we are requesting you to require TMPP prepare a supplemental BACT analysis that includes SCONox in the top-down selection process. Please refer to the enclosure for a more detailed discussion on this and other issues pertaining to the PDOC.

Further, we believe that you must provide public notice and seek public comment on the supplemental BACT analysis and any revisions to the PDOC. We look forward to working with you in this permitting process. If you have any questions, please contact Duong Nguyen of my staff at (415) 944-1142.

Sincerely

*D. Nguyen*  
for  
Mr.  
Chic

PSOOF OF SERVICE (REVISED \_\_\_\_\_) FILED  
ORIGINAL MAILED FROM SACRAMENTO ON 2-7-

*Pat Green*

JAN 17 2002 3:44PM HP LRSRJET 3200

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MAY 08 03 01:37P

be conducted at the maximum operating capacity of the turbines. After the initial performance tests and upon written request and adequate justification (i.e., consistent demonstration of compliance), the annual frequency may be reduced.

8. *Condition 35.* The District set the ammonia slip limit as 10 ppmvd, based on the fact that recent power plants in CA have been permitted at that level. However, we strongly recommend that the District tighten this limit to 5 ppmvd. According to the CARB's Power Plant Guidance, at least two power plants in Massachusetts using SCR have been permitted at a 2 ppmvd limit. Further, several SCR manufacturers, including Mitsubishi and Engelhard, have now guaranteed 5 ppmvd ammonia slip. Therefore, the Guidance suggests an ammonia slip of 5 ppmvd. Based on the available information, we agree with the CARB's Guidance that the ammonia slip limit should be set as 5 ppmvd. Should the supplemental BACT analysis lead to the use of SCONox to control NOx and CO, ammonia emissions will not be an issue. (Condition 51, which specifies an ammonia slip of 10 ppmvd, should also be revised to reflect this recommendation.)
9. *Condition 40.* The District should require that the cooling tower blowdown water quality be tested on a 2 weekly basis. The o/o should also be required to maintain a log containing the date and results of each test and the resulting mass emission rate.
10. *Condition 48.* This is intended as a for-your-information comment. Condition 48 contains several sentences/phrases with potential credible-evidence- "busting" language. The problem will occur when terms and conditions in this construction permit are transferred to a Title V permit at a later date. For example, the last sentence in the first paragraph of the condition reads, "The emission testing will be used to determine compliance with the permitted emission limit indicated in Conditions 35 and 37." This language undermines the purpose of the 1997 Credible Evidence Rule, which is to allow the use of any credible evidence, not just compliance testing, to establish that a source is in violation of an applicable limit. To avoid this problem, the District could change the condition language to a more acceptable format, such as, "The o/o shall perform source testing of the (insert pollutants) emission limits in Condition 35 and 37, in accordance with the test methods specified in Condition 47."
11. *Condition 50.* The reference to "[c]ontinuing compliance with the ammonia slip emission limit of Condition 38c..." appears to be a typographical error. The ammonia slip limit is contained in Condition 35c.
12. *Condition 55a.* This condition requires that the monthly report include exceedances of the opacity limits listed in Condition 34, but does not provide for any visible emission monitoring. Given that the report must be submitted monthly, we recommend that the source conduct, at a minimum, monthly VE monitoring to ensure on-going compliance with the opacity limits. Note that this VE monitoring is different from the more formal annual Method 9 testing recommended in comment #6.



## Exhibit 10 A

## ENCLOSURE 1

**EPA Comments on Pastoria Energy Facility Preliminary Determination of Compliance  
(Draft 6-15-2000)****1) Offsets****A) NO<sub>x</sub> Emission Reduction Credits (ERCs):**

As we have discussed in the past, EPA requires that the District only allow the use of pre-1990 ERCs if they are explicitly included as growth in the emission inventories used for your attainment plans and reasonable further progress plan (RFP)<sup>1</sup>. We understand that NO<sub>x</sub> ERC #S-825-2 (used for interpollutant trading for PM<sub>10</sub>) is based on pre-1990 reductions. In addition, many of the reductions used to generate Chevron NO<sub>x</sub> ERC #C-311 occurred before 1990 (according to table 3 of the District's 1999 evaluation for project 960852).

We understand that the District has included general growth factors in your attainment plan, but has not explicitly included pre-1990 ERCs as current emissions in the attainment plan and has not explicitly included the ERCs as growth in the rate of progress plan. This approach does not demonstrate that growth due to the use of pre-1990 ERCs is included in addition to increases from other sources (such as area and minor sources). Therefore, these emissions can exceed the emissions accounted for in the current attainment plan and rate of progress plan (which are based on a 1990 emissions inventory). Because EPA has proposed to "bump up" the San Joaquin Valley, a new plan and inventory will be required. EPA's acceptance of the proposed ERCs as valid credits is premised on the District's commitment, via its response to these comments, to include these and any other pre-1990 ERCs it would like to make available for use by major sources in the new inventory as growth.

**B) SO<sub>x</sub> ERCs:**

We understand that three SO<sub>x</sub> ERCs (S-259-5, now S-1344-5; S-257-5, now S-257-5; S-56-5, now S-1336-5) were generated based on reductions that occurred in 1991 or 1992, which is before the 1993 emissions inventory date for the District's most recent PM<sub>10</sub> attainment plan. Because these "pre-baseline" ERCs do not appear to be explicitly included in the 1993 emission inventory and the RFP, the use of these credits could hinder future attainment of the PM<sub>10</sub> National Ambient Air Quality Standards. As noted in our the August 30, 1999 letter on the Sunrise Cogeneration project, the District needs to ensure that pre-baseline ERCs are appropriately included in the PM<sub>10</sub> attainment plan and the RFP before allowing their use.

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<sup>1</sup>Please see "Response to Request for Guidance on Use of Pre-1990 ERC's and Adjusting for RACT at Time of Use", dated August 26, 1994, from John Seitz to David Howekamp.

## Exhibit 10 B

## C) Seasonal Credits:

The permit currently contains an annual emissions limit, while the District offset rule is based on quarters. We recommend limiting summer quarter emissions of ozone precursors to the quantity of offsets provided for the summer quarter. We also recommend limiting the winter time emissions of  $PM_{10}$  and  $PM_{10}$  precursors to the amount of winter quarter offsets provided for those pollutants.

D) Use of  $NO_x$  ERCs to mitigate  $PM_{10}$  emissions:

While we are accepting the District's evaluation for this project, we would like to note that all emission trades of this type (including any future trades) must also be supported by a case-by-case evaluation. Please see our prior comments on your PDOCs on La Paloma (April 30, 1999) and Elk Hills (January 14, 2000) for more information on EPA's position on trades of this type.

## 2) Air Toxics

As we have discussed with District staff, EPA recently published a Federal Register notice clarifying that gas turbines with the potential to emit 10 tons of any HAP (including formaldehyde) or 25 tons of total HAPs are subject to a case-by-case air toxics review under section 112(g) of the Clean Air Act. We understand that Pastoria Energy Facility intends to install emission controls that will limit them to less than major source HAP levels. Therefore, the permit must contain enforceable emissions limits on HAP emissions from the source.

In addition, the permit must require source testing. This is especially important due to the uncertainty over whether existing emission factors are accurate for a source that uses XONON or an add-on catalytic oxidizer. One option suggested by the applicant is using the annual VOC source testing as a surrogate for HAPs in lieu of annual HAP testing. EPA would agree to this approach when annual VOC testing shows that total VOCs are so low that no HAP testing is necessary (some District VOC tests of gas turbines have shown virtually no VOC emissions). On the other hand, when VOC testing shows that HAP levels may exceed the major source levels, we believe that additional future HAP testing will be necessary.

## 3) BACT evaluation

We appreciate the District's inclusion of SCONOX in the control technology evaluation as an alternative to SCR, which we had requested in our comments on the PDOC for Elk Hills. This evaluation states that the Federal facility is not in the same "class and category" as the larger Pastoria Energy Facility. We would like to point out that, while we have not made a determination of whether a 1 ppm NOX is achieved in practice for the Federal facility identified in your evaluation, we believe that these two sources would fall within the same class or category of sources. We have enclosed our August 29, 1988 guidance memo entitled "Transfer of Technology in Determining Lowest Achievable Emission Rate" (Enclosure 2), which explains that the emission stream characteristics are the appropriate basis for determining whether two sources fall within the same class or category. We also recommend that the District's evaluation consider

## Exhibit 10 C

the latest information submitted by ABB on April 12, 2000 and the CEC's Final Staff Assessment for Elk Hills<sup>2</sup>.

As the District has documented in your evaluation of PM<sub>10</sub> offset requirements, ammonia can react in the atmosphere to form PM<sub>10</sub>. The District has proposed an ammonia slip limit of 10 ppmvd. However, we strongly recommend that the District tighten this limit to 5 ppmvd if SCR is chosen as the alternative to XONON. According to the CARB's Power Plant Guidance, at least two power plants in Massachusetts using SCR have been permitted at a 2 ppmvd limit. Further, several SCR manufacturers, including Mitsubishi and Engelhard, have now guaranteed 5 ppmvd ammonia slip. Therefore, the Guidance suggests an ammonia slip of 5 ppmvd. Based on the available information, we agree with the CARB's Guidance that the ammonia slip limit should be set at least as low as 5 ppmvd.

#### 4) Start-up and Shut-down conditions

We recommend that the District require testing of PM<sub>10</sub> start-up and shut-down emissions at the same time that source testing is conducted for other pollutants. We would also like to note that the CEMs should be capable of monitoring the higher emissions that may occur during start-up and shut-down. In addition, we believe that the CEMs can, and should, sample often enough during these time periods to accurately quantify emissions during these start-up and shut-down.

#### 5) Analysis of Alternative Sites, Sizes, and Processes

This section of the preliminary determination of compliance evaluation (p 36) lists benefits described by the applicant, but does not contain an independent evaluation by the District. We understand that the California Energy Commission intends to conduct a review of alternate sites, sizes, and processes, that the District may be able to rely on. We recommend that the District include or reference this evaluation, unless the District intends to perform a separate evaluation.

<sup>2</sup> p.33 in part 3 of the FSA, which is dated April 28, 2000

State Of California

The Resources Agency of California

## Memorandum

Date: July 19, 2001  
Telephone: (916) 657-4394

File: 01-AFC-1

To: Chairman William Keese, Presiding Member  
Commissioner, Robert Pemell, Associate Member

From: California Energy Commission - Cheri Davis  
1516 Ninth Street Siting Project Manager  
Sacramento, CA 95814-5512

Subject: **ISSUES IDENTIFICATION REPORT FOR THE EAST ALTAMONT ENERGY CENTER (01-AFC-4)**

Attached is the staff's Issues Identification Report for the East Altamont Energy Center proposal (01-AFC-4). This report serves as a preliminary scoping document that identifies the issues that the Energy Commission staff believes will require careful attention and consideration. Energy Commission staff will present the issues report at the Siting Committee's scheduled Informational Hearing on August 9, 2001, at the Holiday Inn Express in Tracy, California.

cc: Docket (01-AFC-4)  
Proof of Service List

Attachment

should be set at 2 ppm for NO<sub>x</sub>, 2 ppm for CO and 5 ppm for ammonia. Staff will work with Calpine, the Bay Area Air Quality Management District (District) and the EPA staff to resolve this issue prior to the issuance of the District Preliminary Determination of Compliance (PDOC).

2. Effectiveness of the proposed PM10 emission mitigation: Calpine has proposed to mitigate the project's PM10 emissions by paving roads at various locations within a 65-mile radius from the project site. Because the project's direct PM10 emissions and the proposed fugitive dust emission reductions from road paving are highly localized, staff does not believe that the proposed PM10 mitigation package would provide effective mitigation of the project's PM10 impacts.

In addition, the Air Resources Board (ARB) staff issued a letter stating that the use of fugitive emission reductions from paving of roadways may not be appropriate to mitigate PM10 emissions from a combustion source such as the proposed project. The ARB staff maintains that the PM10 from a combustion source, such as the proposed project, is comprised mostly of finer particles (particles that are less than 2.5 microns in diameter and can imbedded deeply in the lung), which are not the same type of particles as those from unpaved roadways.

Staff proposes that Calpine re-evaluate their proposed mitigation, allowing for the fact that only a portion of emission reduction from paving of roads is for particles less than 2.5 microns. In addition, staff will need to work closely with Calpine and the District to locate local PM10 emission reduction sources that can be used to mitigate the project PM10 emissions.

3. Potential new violations of the air quality standard: Calpine has been using an approved modeling method to assess the proposed project emissions' impacts. The model, however, employs a formula that could underestimate the project's NO<sub>2</sub> emission impacts if the wrong assumptions are used. Corrections to this modeling deficiency may reveal that the project's NO<sub>2</sub> emissions could exceed the state 1-hour NO<sub>2</sub> ambient air quality standard. Because the area is currently in attainment for this standard, a new violation could mean that the project may not be able to obtain a permit from the District. Staff will work with Calpine and the District to explore further modeling options to assess the project's emissions impacts.
4. Mitigation for SO<sub>2</sub>: Calpine has not proposed to provide any emission reduction credits to mitigate the project's SO<sub>2</sub> emissions because mitigation would not be required under District rules. Staff believes that the project's SO<sub>2</sub> emissions will need to be mitigated for two reasons: 1) Calpine has underestimated the project's SO<sub>2</sub> emissions by assuming a low sulfur content for the natural gas supply, and 2) because SO<sub>2</sub> is a precursor to PM10, the project SO<sub>2</sub> emissions will contribute to the existing PM10 violations. Staff will work with Calpine to find an acceptable solution to this issue.

Exhibit 12 A

EVIDENTIARY HEARING  
BEFORE THE  
CALIFORNIA ENERGY RESOURCES CONSERVATION  
AND DEVELOPMENT COMMISSION

In the Matter of:	)	
	)	
Application for Certification	)	Docket No.
for the East Altamont Energy	)	01-AFC-4
Center	)	
	)	

TRACY ELKS LODGE # 2031  
6400 11TH STREET  
TRACY, CALIFORNIA

MONDAY, OCTOBER 21, 2002  
10:21 a.m.

Reported by:  
Valorie Phillips  
Contract No. 170-01-001

PETERS SHORTHAND REPORTING CORPORATION (916) 362-2345

1 project our principal PM10 reduction technique was  
2 paving roads. And it was going to be paving roads  
3 from a source that was relatively close to the  
4 project site.

5 We got very strong signals from the  
6 Commission Staff that they did not believe that  
7 paving roads was appropriate because it would not  
8 help air quality in terms of the PM10 that people  
9 breathe. And as a result we switched to a  
10 different approach to satisfying our ERC  
11 requirements.

12 I think that either approach would have  
13 been, in the end, acceptable. But again, I just  
14 wanted to emphasize the distinction between the  
15 emission trends showing an increase in the  
16 directly emitted PM10 that Mr. Sarvey referred to,  
17 and the statements on the following page of  
18 exactly the same document showing that PM10 air  
19 quality is slightly improving in San Joaquin  
20 Valley.

21 Q Mr. Sarvey also asked you questions  
22 concerning the comparison with Tracy ERCs with the  
23 East Altamont ERCs. Do you wish to comment  
24 further in response to those questions?

25 A Yes, I do. One second, please. Yes,

PETERS SHORTHAND REPORTING CORPORATION (916) 362-2345

**Memorandum**

Date: November 5, 2002  
 Telephone: ATSS (916) 653-0062

To: John L. Geesman, Presiding Member  
 Arthur H. Rosenfeld, Associate Member

File: s/tesla/statusreport4

From: California Energy Commission -  
 1516 Ninth Street  
 Sacramento, CA 95814-5512

Jack W. Caswell  
 Energy Commission Project Manager

Subject: **TESLA POWER PROJECT (01-AFC-21) STATUS REPORT #4**

Energy Commission staff held Preliminary Staff Assessment workshops on September 24<sup>th</sup> and 25<sup>th</sup> 2002. Staff is scheduling a workshop in mid-November to discuss unresolved issues to include scheduling with the applicant, other parties and agencies. The applicant is requesting that the project move to Evidentiary Hearings as soon as possible. Staff needs the applicant to provide complete data request responses, and agency documents prior to an FSA publication. We intend to publish the FSA thirty days after receiving this information. Staff believes that an updated schedule from the Committee would be helpful. The following information is a summary of the remaining FSA issues.

**ISSUES UNRESOLVED**

Air Quality, Biological Resources, Land Use, Transmission System Engineering, Visual Resources and Water Resources are the areas of greatest concern at this time.

**AIR QUALITY**

In other cases currently at the Energy Commission, USEPA has identified a concern about the use of an Emission Reduction Credit (ERC) that was created prior to 1990 unless there is appropriate documentation to justify its use. Staff understands that this documentation has not occurred. If USEPA were to disallow its use, then substitute NOx ERCs in the amount of 21 tons would have to be secured by the applicant.

Staff disagrees with the BAAQMD on the efficacy of using PM<sub>10</sub> ERCs from the Altamont Landfill road paving as mitigation. We believe that using dust control to off set combustion related PM<sub>10</sub> does not fully mitigate actual project impacts. Additionally, staff does not agree with the air pollution mitigation proposal by the applicant for the San Joaquin Valley air pollution impacts. Without knowing how the Mitigation Agreement funds would be used staff believes that a substantial residual liability of PM<sub>10</sub> and ozone precursors (NOx and VOC) will not be fully mitigated. However, the San Joaquin Air Pollution Control District is satisfied with the mitigation proposal. Staff held a workshop to address the project concerns but was unable to resolve the differences on these issues. Staff intends to go forward with the FSA once the BAAQMD publishes a Final Determination of Compliance (FDOC). The BAAQMD indicated to staff the FDOC would not be provided until mid-December 2002.



JUN-22-00 THU 02:16 PM ARS STATION SOURCE

FAX NO. 9164455023

P. 01/04



Justin H. Hickox  
Agency Secretary

## Air Resources Board

Alan C. Lloyd, Ph.D.  
Chairman

2020 L Street - P.O. Box 2815 - Sacramento, California 95832



Gray Davis  
Governor

June 16, 2000

To: Air Pollution Control Officers

<b>DOCKET</b>
07-AEC-21
DATE JUN 16 2000
RECD MAR 26 2002

I am writing to express our concerns regarding the increasing use of course particulate matter (PM) emission reductions to offset combustion-generated fine particulate matter increases (e.g., reductions in unpaved road emissions to offset combustion emission increases). Fine particulates, those equal to or smaller than 2.5 microns in diameter (PM<sub>2.5</sub>), have unique pulmonary dynamics. They selectively penetrate into lung alveoli. Whatever chemicals the particulates have absorbed, either at their source or from ambient air, are also transported into the body. Fine particulate matter emissions are a serious human health concern.

In addition, data from the California Emission Inventory Development and Reporting System (CEIDARS) illustrates the incongruity of PM size fraction between unpaved road dust and gaseous fuel combustion. CEIDARS data indicates unpaved road dust is approximately 59 percent PM<sub>10</sub> and 13 percent PM<sub>2.5</sub>. Comparatively, 100 percent of PM from gaseous fuel combustion is less than 2.5 microns.

We believe there is no technical justification for allowing PM emission reductions from road paving to offset PM increases from natural gas combustion. Any ERC granted for reductions in non-combustion course particulate matter should contain conditions to limit the use of the ERC to similar-sized non-combustion particulate matter sources. If ERCs have been granted for paving of roads, those ERCs should not be allowed to be used to mitigate the impacts of combustion particulate.

I hope that you concur with us on this issue. In the future, we intend to negatively comment on proposals that allow non-combustion particulate matter emissions to be used to offset combustion-generated particulate matter emissions.

If you have any questions or would like to discuss this further, please contact me at (916) 445-4383 or Mr. Peter D. Venturini, Chief, Stationary Source Division, at (916) 445-0650 or contact Mr. Raymond E. Menebroker, Chief, Project Assessment Branch, at (916) 322-6026.

Sincerely,

Michael P. Kenny  
Executive Officer

Post-It™ brand fax transmittal memo 7671		# of pages 4
To Keith Golden	From Ben Werner	
Co. CEC	Co.	
Dept.	Phone 322-3987	
Fax 654-3882	Fax	

Exhibit 15 A

## 2002 Almanac Data

# PARTICULATE MATTER < 10 MICRONS PROJECTED EMISSION INVENTORY

## SACRAMENTO METROPOLITAN AQMD DISTRICT

REPORT TYPE: GROWN AND CONTROLLED

SEASON: SUMMER

BASE YEAR: 2001

All emissions are represented in Tons per Day and reflect the most current data provided to ARB  
Download this data as a comma delimited file.

AREA-WIDE SOURCES	
SUMMARY CATEGORY NAME	2001
<b>SOLVENT EVAPORATION</b>	
CONSUMER PRODUCTS	0.000
ARCHITECTURAL COATINGS AND RELATED PROCESS SOLVENTS	0.000
PESTICIDES/FERTILIZERS	0.000
ASPHALT PAVING / ROOFING	0.008
<b>* TOTAL SOLVENT EVAPORATION</b>	0.008
<b>MISCELLANEOUS PROCESSES</b>	
RESIDENTIAL FUEL COMBUSTION	1.035
FARMING OPERATIONS	1.560
CONSTRUCTION AND DEMOLITION	11.910
PAVED ROAD DUST	14.125
UNPAVED ROAD DUST	14.729
FUGITIVE WINDBLOWN DUST	0.777
FIRES	0.051
WASTE BURNING AND DISPOSAL	0.567
COOKING	1.140
<b>* TOTAL MISCELLANEOUS PROCESSES</b>	45.894
<b>** TOTAL AREA-WIDE SOURCES</b>	45.902
<b>GRAND TOTAL FOR SACRAMENTO METROPOLITAN AQMD</b>	45.902

\* Emissions from natural sources are excluded.

Exhibit 15 B

**2002 Almanac Data****PARTICULATE MATTER < 10 MICRONS PROJECTED  
EMISSION INVENTORY****SACRAMENTO METROPOLITAN AQMD DISTRICT**

REPORT TYPE: GROWN AND CONTROLLED

SEASON: WINTER

BASE YEAR: 2001

All emissions are represented in Tons per Day and reflect the most current data provided to ARB  
Download this data as a comma delimited file.

AREA-WIDE SOURCES	
SUMMARY CATEGORY NAME	2001
<b>SOLVENT EVAPORATION</b>	
CONSUMER PRODUCTS	0.000
ARCHITECTURAL COATINGS AND RELATED PROCESS SOLVENTS	0.000
PESTICIDES/FERTILIZERS	0.000
ASPHALT PAVING / ROOFING	0.008
<b>* TOTAL SOLVENT EVAPORATION</b>	0.008
<b>MISCELLANEOUS PROCESSES</b>	
RESIDENTIAL FUEL COMBUSTION	8.933
FARMING OPERATIONS	2.754
CONSTRUCTION AND DEMOLITION	10.068
PAVED ROAD DUST	13.460
UNPAVED ROAD DUST	3.929
FUGITIVE WINDBLOWN DUST	0.126
FIRES	0.051
WASTE BURNING AND DISPOSAL	0.567
COOKING	1.140
<b>* TOTAL MISCELLANEOUS PROCESSES</b>	41.027
<b>** TOTAL AREA-WIDE SOURCES</b>	41.035
<b>GRAND TOTAL FOR SACRAMENTO METROPOLITAN AQMD</b>	41.035

\* Emissions from natural sources are excluded.

CALIFORNIA  
ENERGY  
COMMISSION

# TRACY PEAKER PROJECT

Application For Certification (01-AFC-16)  
San Joaquin County



**PRESIDING MEMBER'S  
PROPOSED DECISION**

MAY 2002  
P800-02-004



Gray Davis, Governor

**Verification:** The project owner/operator shall make records available for inspection by representatives of the District, CARB and the Commission upon request.

**AQ-76** The owner shall maintain records of hours of emergency and non-emergency operation. Records shall include the date, the number of hours of operation, the purpose of the operation (e.g., load testing, weekly testing, rolling blackout, general area power outage, etc.), and the sulfur content of the diesel fuel used. Such records shall be made available for District inspection upon request for a period of two years. [District Rules 2201 and 4701]

**Verification:** The project owner/operator shall make records available for inspection by representatives of the District, CARB and the Commission upon request. Records shall be retained for a period of two years.

**AQ-77** All records shall be retained for a minimum of 2 years, and shall be made available for District inspection upon request. [District Rule 1070]

**Verification:** The project owner/operator shall make the site available for inspection by representatives of the District, CARB and the Commission.

**AQ-78** In order to enhance air quality in the City of Tracy and San Joaquin County, GWF will provide and implement a program of local PM<sub>10</sub> and ozone precursor emission reductions. Such emission reductions may be comprised of new mobile or stationary source emission reductions in the area, or purchase of locally generated banked emission reduction credits, or a combination of each. This condition is agreed to in order to address concerns raised by the public, and is not imposed to mitigate a significant impact under CEQA. Nothing in this condition shall require GWF to surrender or forfeit the emission reduction credits that have already been secured to offset the TPP.

**Protocol:** In coordination with the SJVUAPCD, the City of Tracy and San Joaquin County, GWF shall prepare an emission reduction plan comprised of emission reductions of PM<sub>10</sub> and ozone precursors created in San Joaquin County with preference being given to those generated in or near the City of Tracy. The plan shall be comprised of two parts:

- (1) The identification and acquisition of emission reduction credits, (ERCs) located in San Joaquin County, with preference being given to ERCs in or near the City of Tracy, and
- (2) The plan for creation of new emission reductions will provide actual combustion emission reductions in or near the City of Tracy during the high PM<sub>10</sub> season (September through January) and ozone precursors during the high ozone season (May through September). The emission reduction scheme under this plan shall include consideration of improvements to the Tracy Biomass Plant

operations, fireplace retrofits, and lawn mower and leaf blower conversions.

The plan shall also include a schedule of implementation. The emission reduction plan shall be sent to the appropriate agencies of San Joaquin County, the SJVUAPCD, and the City of Tracy for review and comment. GWF may revise the plan according to those comments. The plan, together with the comment, shall be forwarded to the CPM for review. After consideration of the comments by the CPM, GWF shall implement the plan in accordance with the schedule.

**Verification:** Ninety (90) days prior to commencement of commercial operation, GWF shall submit the plan for review by the City of Tracy, the County of San Joaquin, and the SJVUAPCD.

Forty-five (45) days prior to commercial operation, GWF shall submit the plan, addressing the comments received, to the CPM.

After review and comment by the CPM, and no later than 15 days prior to operation, GWF will address the issues raised by the CPM, and shall implement the plan in accordance with the implementation schedule. If amendments to the project license may be necessary to implement the plan, such amendments shall be accounted for in the implementation schedule, and applications shall be submitted in a timely manner.

### **Reduction in Hours of Operation**

In order to further benefit local air quality, GWF will prepare and implement a plan for reduction in the actual operating hours for the TPP from the current maximum of 8,000 hrs/year. This condition is imposed in response to public concerns and is not required to mitigate a significant impact under CEQA. Nothing in this condition shall require GWF to surrender or forfeit emission reduction credits that have already been secured to offset the TPP.

**Protocol:** GWF will prepare a plan for reducing the operating hours of the plan from 8,000 hours annually to a lesser amount, not in conflict with its contractual obligation to the Department of Water Resources. The plan shall consider and evaluate both a reduction in the annual maximum operating hours, and maximum allowable hours of operation averaged over a number of years. The plan shall include a schedule for implementation. Such a plan shall be submitted to the CPM, the County of San Joaquin and the City of Tracy for review and comment.

After consideration the comments, GWF shall implement the plan according to the implementation schedule contained therein.

Exhibit 16 D

**Verification:** Sixty (60) days prior to commencement of commercial operation, GWF shall submit its plan for reduction in hours of operation for review and comment by the CPM, the City of Tracy, and the County of San Joaquin.

Thirty (30) days prior to the commercial operation, after consideration of the comments of the CPM, the City of Tracy, and the County of San Joaquin, GWF shall implement the plan in accordance with the schedule of implementation contained therein. If amendments to the project license may be necessary to implement the plan, such amendments shall be accounted for in the implementation schedule, and applications shall be submitted in a timely manner.

**X. EMISSION REDUCTION CREDITS****Definition of  
ERCs**


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Certain pollutant emission reductions due to equipment shutdown or voluntary control may be converted to emission reduction credits (ERCs) and deposited in a bank maintained by the air districts. These ERCs may then be used as "offsets" to compensate for an increase in emissions due to a new or modified emission source regulated by the districts. In the SMAQMD, ERCs may also be used as an alternative to strict compliance with specified SMAQMD control measures. If a permitted source cannot meet the applicable emission standard requirements in specified rules, usually because it is technically infeasible or not cost effective, the source may lease or purchase ERCs to achieve the required reductions.

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**ERC  
disbenefits**

Some ERCs resulting from source shutdowns or from modifications that occur prior to subsequent rules essentially count against reductions assessed from control measures. Since these ERCs can be used to offset excess air pollutants from sources, they may not be considered a realized benefit to air quality in most cases. The milestone analysis must evaluate and account for any ERC transactions that may nullify emission reduction benefits from district committal control measures in the 1994 SIP.

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**NSR and  
retired ERCs**

ERCs used for new source review (NSR) projects may be considered real reductions since they offset new emissions generated by growth. NSR project emissions are already accounted for in the 1994 SIP emission forecasts as growth. In a similar manner, retired ERCs may be counted as true emission reductions since they cannot be reused and are a permanent air quality benefit.

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**ERC  
accounting**

The following Tables 13 and 14 show the adjustments for the different types of ERC transactions as applied to the total 2002 emission reductions obtained from district control measures. The net overall emission reductions represent the realized benefit from district committal/new control measures for the Sacramento nonattainment area.

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## Reduction in 2002 Monthly Peak & Electr

Revised April 2003

(For 2001 Peak Demand Data, See Other Page)

	Monthly Peak Demand (Megawatts)					Month	
	Megawatt Difference (00-01)	Megawatt Difference (01-02)	Percent Difference (00-01)	Percent Difference (01-02)	Percent Difference (00-02)	MWh Difference (00-01)	Dif
January	-2,091	234	-6.2%	0.7%	-5.5%	-651,594	-
February	-2,578	1,134	-8.0%	3.8%	-4.5%	-791,618	
March	-2,967	1,200	-9.2%	4.1%	-5.5%	-445,230	-
April	-2,866	1,676	-9.0%	5.8%	-3.7%	-984,494	
May	-3,595	1,219	-10.4%	3.9%	-6.9%	-1,588,139	
June	-5,570	1,138	-14.1%	3.3%	-11.2%	-2,989,405	1,
July	-4,455	3,275	-10.7%	8.8%	-2.8%	-1,833,204	1,
August	-3,796	1,872	-8.9%	4.8%	-4.5%	-1,596,074	
September	-3,163	2,506	-8.0%	6.9%	-1.7%	-1,160,469	1,
October	-3,106	411	-8.8%	1.3%	-7.6%	-1,161,482	
November	-1,588	526	-4.9%	1.7%	-3.3%	-1,363,755	
December	-777	-3	-2.3%	0.0%	-2.4%	-796,863	

NOTE: Data has been revised for 2002. Please see: Revised Energy Conservation Impact Assessment  
3 pgs, 469 kb)

### Complete Monthly Analyses



Actual Data, January 2001 to December 2

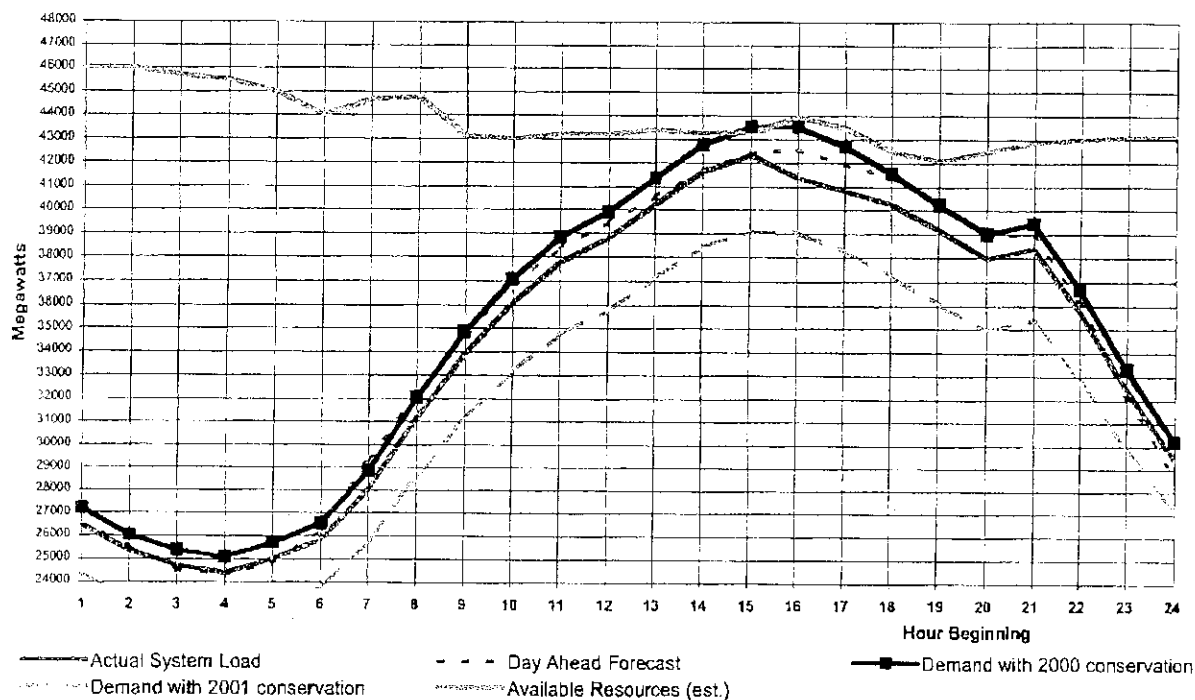
(MS Excel Spreadsheet)



Chart Showing Peak Demand, July 10, 2002  
(Acrobat PDF file)

**CALIFORNIA ENERGY COMMISSION**1516 Ninth Street, MS-29  
Sacramento, California 95814Web Site: [www.energy.ca.gov](http://www.energy.ca.gov)

**Peak Electricity Demand In the ISO Control Area on July 10, 2002, with Available Resources and Alternative Demand Scenarios**



This graph compares the July 10, 2002 demand with two alternative scenarios. The green line on top shows the available electricity generation resources on that day. Rolling black outs typically would occur when operating reserves dip below two percent. The blue, dotted line is the ISO's forecast of expected demand. The red line shows the actual demand in the ISO control area. The green, dashed line illustrates the Energy Commission's scenario of what demand could have been if Californians were conserving at the same rate as last summer. The black line represents what electricity demand would have been based on 2000 usage patterns.

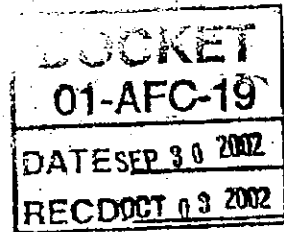


## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX

75 Hawthorne Street  
San Francisco, CA 94105-3801

September 30, 2002



Mr. Jorge DeGuzman  
Permitting Program Supervisor  
Sacramento Metropolitan Air Quality Management District  
777 12th Street, 3<sup>rd</sup> Floor  
Sacramento, CA 95814-1908

Dear Mr. DeGuzman:

Thank you for the opportunity to comment on Sacramento Metropolitan Air Quality Management District's (SMAQMD) Preliminary Determination of Compliance (PDOC) for the Sacramento Municipal Utility District - Cosumnes Power Plant (CPP) project. The PDOC for CPP is dated August 27, 2002, and was received in our office on August 28, 2002. The CPP project is proposed as a two-phase project. Only the 530 MW -capacity Phase I, consisting of two combined cycle gas turbines, one condensing steam turbine, and one 9-cell cooling tower, is addressed at this time.

EPA agrees with the proposed Best Available Control Technology (BACT) limits for  $\text{NO}_x$ , 2.0 ppmvd @ 15%  $\text{O}_2$ , 1-hour average; CO, 4.0 ppmvd @ 15%  $\text{O}_2$ , 3-hour average; and ROC, 1.4 ppmvd @ 15%  $\text{O}_2$  as methane. The applicant plans to use dry low  $\text{NO}_x$  combustors and a selective catalytic reduction system to achieve the  $\text{NO}_x$ , ROC and CO emission limits.  $\text{PM}_{10}$  will be controlled by using pipeline quality natural gas.

Also, we would like to acknowledge that SMAQMD, the permit applicant, and EPA's modeling staff worked together to determine that the interpollutant trade (IPT) ratios for VOC for  $\text{NO}_x$  of 3.9:1, and for  $\text{SO}_x$  to  $\text{PM}_{10}$ , 2:1, would result in a net air quality benefit for the CPP project. EPA staff have concluded based on the specific information provided that the IPT is appropriate. We appreciate you working with Region 9 staff prior to release of the PDOC, in order to reach consensus on the approach leading to the final IPT ratios. Please note that this approval does not provide precedent for approving any other interpollutant trade (see enclosure).

Finally, while we agree with the control technology requirements on the SMUD-Cosumnes PDOC, we have also identified some issues (enclosed) that must be resolved prior to permit issuance. The primary permit deficiency centers on the proposed  $\text{PM}_{10}$  emission reduction credits. The  $\text{PM}_{10}$  ERCs, primarily road pavement credits, are not valid because SMAQMD does not have an approved  $\text{PM}_{10}$  State Implementation Plan, and approved rules that would allow innovative, non-traditional credits to be created and used. SMAQMD has two options: (1) submit some elements of a moderate area plan (e.g., RACT/RACM), and an

PROOF OF SERVICE (REVISED \_\_\_\_\_) FILED WITH  
ORIGINAL MAILED FROM SACRAMENTO ON 10-3-02

*Johnson*

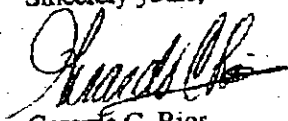
**EPA Comments  
on  
Preliminary Determination of Compliance  
SMUD-Cosumnes Power Plant**

1. PM10 Emission Reduction Credits – In general, EPA requires that all ERCs used as offsets must be real, permanent, quantifiable, surplus, and federally enforceable. Phase I of the SMUD-Cosumnes Power Plant project will rely on both traditional and non-traditional emission reduction credits in Sacramento County to offset 79.5 TPY of PM<sub>10</sub> emissions. It is particularly problematic to demonstrate that non-traditional ERCs, resulting from the road paving, satisfy the surplus requirement. The CPP is proposing to offset approximately 49.5 TPY of PM<sub>10</sub> emissions by paving segments of eight roads that are currently unpaved. To demonstrate emission reductions are surplus, the District must include, among other things, a comprehensive emission inventory, identify roads to pave, include the schedule for road pavement, and elaborate on the control measures that are responsible for the emission reduction credits. EPA policy requires that nontraditional credits, such as those from road paving, be created and used pursuant to rules approved by EPA into State Implementation Plans which contain quantification protocols, proper monitoring, record keeping and reporting requirements, and mechanisms to enforce the creation and validity of the credits.
2. Modeling Issues – EPA is providing formal approval of interpollutant trades of VOC for NO<sub>x</sub> (3.9:1), and SO<sub>x</sub> for PM<sub>10</sub> (2:1) ratios for this particular project. Despite shortcomings in the methods used to arrive at the ratios, they were the result of a consensus process involving EPA, ARB, and the District. This approval does not provide precedent for approving any other interpollutant trades. Each such request must be based on the specific modeling characteristics for the location and design of the project.
3. Combustion Turbine MACT – It is unclear whether SMUD-Cosumnes will be a major source of hazardous air pollutants. Until EPA promulgates a maximum achievable control technology (MACT) standard for combustion turbines, all new stationary combustion turbines that are major for hazardous air pollutants are subject to case-by-case MACT determinations in accordance with section 112(g) of the Clean Air Act. EPA clarified this requirement in an interpretive rule published in the Federal Register on April 21, 2000 (65 FR 21363), accessible through EPA website, "[www.epa.gov/ttn/atw/combust/turbine/turbpg.html](http://www.epa.gov/ttn/atw/combust/turbine/turbpg.html)." If the combustion turbines are not major for HAPs, the permit must document that fact.

approvable request for redesignation to attainment for  $PM_{10}$ , which includes the necessary maintenance plan; or, (2) require the facility to provide the appropriate amount of valid  $PM_{10}$  credits to offset the new emissions of the proposed CPP.

If you have any questions regarding these comments, please contact me at (415)972-3974, or have your staff contact Manny Aquitania at (415)972-3977.

Sincerely yours,



Gerardo C. Rios  
Chief, Permits Office

Enclosure

cc: Aleta Kennard, SMAQMD  
Brigette Tollstrup, SMAQMD  
Jan Schori, Sacramento Municipal Utility District  
Paul Richins, Jr., California Energy Commission  
Tuan Ngo, California Energy Commission

## Exhibit 21 A

	LLP				County	March 7, 2001	
<u>Los Esteros Critical Energy Facility</u> (01-AFC-12)	Calpine c* Power	180 MW	Simple Cycle	n/a	North San Jose Santa Clara County	AFC Filed August 6, 2001	Septem 20
<u>Valero Cogeneration Project</u> (01-AFC-5)	Valero Refining Company	51 MW Another 51 MW On Hold	Cogeneration	\$100 million	Benecia Solano County	AFC Filed May 7, 2001	June 6

POWER PLANT PROJECTS RECENTLY  
BY ENERGY COMMISSION

## UNDER CONSTRUCTION

As of March 27, 2003

Light Green indicates construction started  
Redish-brown indicates on hold.PROJECTS GREATER THAN 300 MW  
UNDER CONSTRUCTION

Project	Applicant / Host	Size (megawatts)	Project Type	Capital Cost	Location	AFC Filing Date [1]	D: Ad
<u>Blythe Energy</u> (99-AFC-8)	Blythe Energy LLC	520 MW	Combined Cycle	\$250 million	Blythe, Riverside County	AFC Filed Dec. 9, 1999	M
<u>Contra Costa Repower</u> (00-AFC-1)	Mirant	530 MW	Combined Cycle	\$200-\$300 million	Antioch, Contra Costa County	AFC Filed Jan. 31, 2000	
<u>Elk Hills</u> (99-AFC-1)	Sempra/OXY	500 MW	Combined Cycle	\$300 million	Elk Hills, Kern County	AFC Filed Feb. 24, 1999	
<u>High Desert</u>	Inland Group	720 MW	Combined	\$350+	Victorville,	AFC Filed	

<http://www.energy.ca.gov/sitingcases/approved.html>

5/7/2003

## Exhibit 21 B

(97-AFC-1)	and Constellation Energy		Cycle	million	San Bernardino County	June 30, 1997	
<u>Magnolia Power Project</u> (01-AFC-6)	Southern California Public Power Authority	328 MW	Combined Cycle	\$200- 250 million	Burbank LA County	AFC Filed May 14, 2001	Se
<u>Metcalf Energy Center</u> (99-AFC-3)	Calpine and Bechtel	600 MW	Combined Cycle	\$300- 400 million	San Jose, Santa Clara County	AFC Filed APR. 30, 1999	
(Western) <u>Midway- Sunset</u> (99-AFC-9)	ARCO Western Energy Company	500 MW	Combined Cycle	\$250 million	McKittrick, Kern County	AFC Filed Dec. 22, 1999	N
<u>Mountainview</u> (00-AFC-2)	Intergen (Shell-Bechtel venture)	1,056 MW	Combined Cycle	\$550 million	San Bernardino County	AFC filed Feb. 1, 2000	
<u>Otay Mesa</u> (99-AFC-5)	Otay Mesa Generating Company, LLC (Calpine Corporation)	510 MW	Combined Cycle	\$350 million	Otay Mesa area, San Diego County	AFC Filed August 2, 1999	O
<u>Pastoria</u> (99-AFC-7)	Enron	750 MW	Combined Cycle	\$350- 450 million	Tejon Ranch, Kern County	AFC Filed Nov. 30, 1999	Ja
<u>Russell City Energy Center</u> (01-AFC-7)	Calpine/Bechtel Inc.	600 MW	Combined Cycle	\$300- 400 million	Hayward Alameda County	AFC Filed May 22, 2001	Ju
<u>Three Mountain Power</u> (99-AFC-2)	Ogden Pacific Power	500 MW	Combined Cycle	\$300 million	Burney, Shasta County	AFC Filed March 3, 1999	
<b>12 plants</b>	<b>TOTAL MW</b>	<b>7,114 MW</b>					

**PROJECTS LESS THAN 300 MW  
UNDER CONSTRUCTION**

Yellow indicates Small Power Plant Exemption project.  
Redish-brown indicates on hold.

Project	Applicant / Host	Size (megawatts)	Project Type	Capital Cost	Location	AFC Filing Date <sup>(1)</sup>	D:
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## Exhibit 21 C

							C
<u>Modesto Irrigation District - Woodland II Project</u> (01-SPPE-1)	Modesto Irrigation District	80 MW	Combined Cycle	\$60 million	Modesto, Stanislaus County	SPPE Filed May 4, 2001	C M
<u>Sunrise Phase II - Combined Cycle</u> (98-AFC-4C) EXPANSION PROJECT TO SIMPLE CYCLE PHASE I	Edison Mission Energy and Texaco Global Gas & Power	265 MW	Combined Cycle		Fellows, Kern County	Amendment to Certification filed 5/14/01	Fe
<u>Tracy Peaker Power Plant Project</u> (01-AFC-16)	GWF Corporation	169 MW	Simple Cycle	n/a	Tracy San Joaquin County	AFC Filed August 16, 2001	C
<u>United Golden Gate (Phase I)</u> (00-AFC-5)	El Paso Merchant Energy Company	51 MW	Simple Cycle	NA	San Francisco, San Mateo County	AFC Filed September 29, 2000	

[1] Applicant's filing date of Application For Certification (AFC).

[2] Date Commission formal process begins following Executive Director recommendation and Commission acceptance of Data Adequacy of the AFC.

[3] Date Commission issues final decision accepting or denying the application.

[4] Construction information current as of November 2002



## Ozone Transport

Since 1989, the ARB staff has evaluated the impacts of the transport of ozone and ozone precursor emissions from upwind areas to the ozone concentrations in downwind areas. These 12 years with analyses demonstrate that the air basin boundaries are not true boundaries of air masses. All urban areas are upwind contributors to their downwind neighbors with the exception of San Diego. Figure 3-5 shows the flow of pollutants throughout the State. The ozone problem in some rural areas is caused almost solely by transported pollutants. These areas, although designated as nonattainment, are not required to adopt an air quality plan because local control strategies in these areas would not be effective in reducing ozone concentrations. However, these areas are subject to many statewide control strategies, such as cleaner fuels and low emission vehicles. More detailed information about ozone transport is available on the web at: [www.arb.ca.gov/iaqd/transport/transport.htm](http://www.arb.ca.gov/iaqd/transport/transport.htm).

